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11  
12 **UNITED STATES DISTRICT COURT**  
13 **NORTHERN DISTRICT OF CALIFORNIA**  
14 **OAKLAND DIVISION**

15 KOSS CORPORATION,

16 Plaintiff,

17 v.

18 PLANTRONICS INC. and  
19 POLYCOM, INC.,

20 Defendants.  
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27  
28

Case No. 4:21-cv-03854-JST

**DEFENDANTS PLANTRONICS INC. AND  
POLYCOM, INC.'S NOTICE OF MOTION  
AND MOTION TO DISMISS FIRST  
AMENDED COMPLAINT**

Date: December 9, 2021  
Time: 2:00 PM  
Place: Courtroom 6, 2nd Floor  
Judge: Hon. Jon S. Tigar

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**NOTICE OF MOTION AND MOTION**

PLEASE TAKE NOTICE THAT on December 9, 2021, at 2:00 PM, or as soon thereafter as this matter may be heard by the Honorable Jon S. Tigar in Courtroom 6, 2nd floor, of the above-entitled Court, located at 1301 Clay Street, Oakland, California 94612, Defendants Plantronics Inc. and Polycom, Inc. (collectively, “Poly”) will, and hereby do, move to dismiss the First Amended Complaint (“FAC”) (ECF No. 71) of Plaintiff Koss Corporation (“Koss”) pursuant to Federal Rule of Civil Procedure 12(b)(6). Poly’s motion is based on this Notice of Motion and Motion, the accompanying Memorandum of Points and Authorities, and all other papers in this matter.

**STATEMENT OF RELIEF REQUESTED**

Poly respectfully requests that the Court dismiss Koss’s FAC with prejudice under Rule 12(b)(6) for failure to state a claim upon which relief can be granted. The FAC asserts alleged infringement of six related patents: U.S. Patent Nos. 10,206,025 (“the ’025 patent”), 10,368,155 (“the ’155 patent”), 10,469,934 (“the ’934 patent”), 10,506,325 (“the ’325 patent”), 10,757,498 (“the ’498 patent”), and 10,848,852 (“the ’852 patent”). ECF No. 71, Counts I–VI.

**STATEMENT OF ISSUES TO BE DECIDED**

Whether the claims of the asserted patents are ineligible for patenting under 35 U.S.C. § 101.

**MEMORANDUM OF POINTS AND AUTHORITIES**

**I. INTRODUCTION**

The claims of the asserted patents are invalid because they are broadly directed to the abstract idea of wireless communication over a network and fail to recite any inventive concept. The Federal Circuit has repeatedly invalidated analogous claims that are “directed to the abstract idea of communication over a network to interact with a device,” including on Rule 12 motions to dismiss. *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 770 (Fed. Cir. 2019); *see also Chamberlain Grp., Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1346 (Fed. Cir. 2019) (claims “directed to wirelessly communicating status information about a system”); *Affinity Labs of Tex., LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1269 (Fed. Cir. 2016) (claims directed to “wireless streaming of media”); *Sensormatic Elecs., LLC v. Wyze Labs, Inc.*, — F. App’x —, 2021 WL 2944838, at \*3 (Fed. Cir. July 14, 2021) (claims “directed to the abstract ideas of wireless communication”).

1 The six asserted patents, which are all related and share a specification, are titled “System  
 2 with Wireless Earphones.” In describing the prior art, the patents admit that “[d]igital audio players,  
 3 such as MP3 players and iPods, that store and play digital audio files, are very popular” and  
 4 “[o]ften” include “in-ear type headphones.” *E.g.*, ’025 pat. 1:41–47.<sup>1</sup> The patents purport to address  
 5 the alleged problem that “[t]he cord . . . between the headphones and the data storage unit can be  
 6 cumbersome and annoying to users, and the length of the cord limits the physical distance between  
 7 the data storage unit and the headphones.” *Id.* at 1:47–50. According to the patents, the only  
 8 “cordless headphones [that] have been proposed . . . are quite large and are not in-ear type phones.”  
 9 *Id.* at 1:51–57. To solve this alleged problem, the “present invention is directed to a wireless  
 10 earphone that comprises a transceiver circuit for receiving streaming audio from a data source, such  
 11 as a digital audio player or a computer, over an ad hoc wireless network.” *Id.* at 1:65–2:2. Thus,  
 12 similar to the patent that the Federal Circuit invalidated in *Chamberlain*, “[t]he only described  
 13 difference between the prior art [earphone] systems and the claimed [earphone] system is that the  
 14 [audio] information . . . is communicated wirelessly, in order to overcome certain undesirable  
 15 disadvantages of systems using physical signal paths.” 935 F.3d at 1346. This “broad concept of  
 16 communicating information wirelessly, without more, is an abstract idea.” *Id.* at 1347.

17 As explained below, the claims purport to implement this abstract idea with nothing more  
 18 than generic, conventional, and functionally recited components, such as an “audio player,”  
 19 “earphones,” “antenna,” “processor,” “battery,” “microphone,” etc. “These conventional  
 20 components, all recited in a generic way,” cannot “save the claim[s] from abstractness” as a matter  
 21 of law. *Id.* at 1348. The claims of the asserted patents are thus invalid under § 101.

22 No claim construction is needed to grant this motion. Koss has already contended in this  
 23 case that “all terms in the asserted patents should be afforded their plain and ordinary meaning and  
 24 no construction is necessary.” ECF No. 32 at 4. Moreover, despite having already amended its  
 25 complaint after Poly filed an initial motion for judgment on the pleadings of patent-ineligibility  
 26

27 <sup>1</sup> Because all six patents share a common specification, when referring to all of them, this brief cites  
 28 the ’025 patent for convenience. The ’025, ’155, ’934, ’325, ’498, and ’852 patents are attached to  
 the FAC as Exhibits A, B, C, D, J, and K. *See* ECF Nos. 71-1, 71-2, 71-3, 71-4, 71-10, 71-11.

(ECF No. 62), Koss does not plead any factual allegations that the asserted patents recite any inventive concept. At most, the FAC repeats in boilerplate fashion for each patent that “the non-conventional and non-generic combination of claim limitations is patentably distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.” ECF No. 71, ¶¶ 64, 77, 90, 103, 116, 129. The Federal Circuit has rejected attempts to create factual disputes with such generic statements, which are “divorced from the claims or the specification [and] do[] not defeat a motion to dismiss; only plausible and specific factual allegations that *aspects of the claims* are inventive are sufficient.” *Dropbox, Inc. v. Synchronoss Techs., Inc.*, 815 F. App’x 529, 538 (Fed. Cir. 2020) (quotation omitted). The FAC lacks any such plausible and specific allegations and thus fails to raise any factual dispute under *Alice*. Koss has already been given the chance to amend its complaint to address Poly’s § 101 arguments (ECF No. 79), and any further amendment would be futile. The Court should thus dismiss the FAC with prejudice.

## II. STATEMENT OF FACTS

Koss filed this case in the Western District of Texas, Waco Division, on July 22, 2020, asserting infringement of the related ’025, ’155, ’934, and ’325 patents. ECF No. 1, Counts I–IV. Poly answered the Complaint on October 1, 2020 (ECF No. 22) and filed a motion to transfer the case to this District (ECF No. 29), which was granted on May 21, 2021 (ECF No. 46).

In this Court, Poly filed a motion for judgment on the pleadings under Rule 12(c) asserting that the four originally asserted patents are patent-ineligible under 35 U.S.C. § 101. ECF No. 62. Koss responded to Poly’s motion on the merits (ECF No. 69), and Poly replied (ECF No. 70). On the same day that Poly filed its reply, Koss filed the FAC without leave of Court. ECF No. 71. In addition to the four original patents, the FAC asserts the ’498 and ’852 patents, which are continuations of the original patents and thus share the same specification. *Id.*, Counts V–VI. Because Koss filed the FAC after its response to Poly’s original § 101 motion, Koss had ample opportunity to attempt to add any allegations to address Poly’s arguments. Poly then filed motions to stay the case (ECF No. 72) and to strike the FAC (ECF No. 74). Following a conference with the Court, the parties agreed, and the Court ordered, that Koss is granted leave to file the FAC and that this case is stayed pending resolution of this motion to dismiss the FAC. ECF No. 79.

### III. LEGAL STANDARDS

To survive a motion to dismiss under Rule 12(b)(6), “a complaint must contain sufficient factual matter . . . to state a claim to relief that is plausible on its face.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quotation omitted). In ruling on such a motion, the Court is “not bound to accept as true a legal conclusion couched as a factual allegation.” *Id.* (quotation omitted).

Patent eligibility under 35 U.S.C. § 101 is a threshold issue that may be decided on a motion to dismiss “when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.” *Voter Verified, Inc. v. Election Sys. & Software LLC*, 887 F.3d 1376, 1384 (Fed. Cir. 2018) (quotations omitted). The Federal Circuit has “repeatedly affirmed § 101 rejections at the motion to dismiss stage,” *Cleveland Clinic Found. v. True Health Diagnostics LLC*, 859 F.3d 1352, 1360 (Fed. Cir. 2017), and has “repeatedly recognized that in many cases it is possible and proper to determine patent eligibility under 35 U.S.C. § 101 on a Rule 12(b)(6) motion,” *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1373–74 (Fed. Cir. 2016).

By enumerating categories of patent-eligible subject matter, § 101 “contains an important implicit exception: . . . abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quotation omitted). In *Alice*, the Court set forth a two-step test “for distinguishing patents that claim . . . abstract ideas” from patent-eligible applications. *Id.* at 217.

First, the Court must “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* “*Alice* step one presents a legal question” only, which “does not require an evaluation of the prior art or facts outside of the intrinsic record.” *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1372, 1374 (Fed. Cir. 2020). The analysis often begins “with an examination of eligible and ineligible claims of a similar nature from past cases.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1295 (Fed. Cir. 2016). “Under this inquiry, [courts] evaluate the focus of the claimed advance over the prior art to determine if the character of the claim as a whole, considered in light of the specification, is directed to excluded subject matter.” *Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019) (quotation omitted).

Where a claim recites “a desired function or outcome, without providing any limiting detail that confines the claim to a particular solution to an identified problem,” the “functional nature of the

claim confirms that it is directed to an abstract idea.” *Affinity Labs*, 838 F.3d at 1269 (Fed. Cir. 2016). The “essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101, especially in the area of using generic computer and network technology.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016).

There is no need to analyze every claim where “all the claims are ‘substantially similar and linked to the same abstract idea,’ e.g., as in a representative independent claim. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014).

Second, if a claim is directed to an abstract idea, the Court must “determine whether the additional elements [in the claim] transform the nature of the claim” by reciting “an inventive concept—i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.” *Alice*, 573 U.S. at 217–18 (quotations omitted). “What is needed is an inventive concept in the non-abstract application realm.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018). Even if “the techniques claimed are groundbreaking, innovative, or even brilliant, [ ] that is not enough” if “the advance lies entirely in the realm of abstract ideas.” *Id.* at 1163 (quotation omitted).

To the extent there are any non-abstract elements, the claims are still ineligible if those elements recite “well-understood, routine, conventional activities previously known to the industry.” *Alice*, 573 U.S. at 225 (quotation omitted). “[T]he relevant inquiry is not whether the claimed invention as a whole is unconventional or non-routine,” but “whether the claim limitations other than the invention’s use of the ineligible concept to which it was directed were well-understood, routine and conventional.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). “[C]onventional computer, network, and display technology for gathering [and] sending . . . information” is “insufficient.” *Elec. Power Grp.*, 830 F.3d at 1355 (quotation omitted).

#### IV. ARGUMENT

The asserted patents are directed to the abstract idea of wireless communication over a network. The patents merely recite generic wireless headphones that receive streaming audio over a wireless network using conventional technology. *See* ’025 pat. 1:65–2:16. As explained below, Federal Circuit case law is clear that the claimed subject matter is abstract. Nor do the claims recite

any specialized hardware, specialized software, or any other inventive concept that would take them out of the realm of abstract ideas. All claims of the asserted patents thus fail both steps of *Alice*.

**A. Wireless communication over a network is an abstract idea.**

The Federal Circuit has repeatedly confirmed that wireless communication is an abstract idea. *Chamberlain*, 935 F.3d at 1346; *ChargePoint*, 920 F.3d at 770; *Affinity Labs*, 838 F.3d at 1269; *Sensormatic*, 2021 WL 2944838, at \*3. These four cases are dispositive of this matter.

In *Chamberlain*, the claims recited “an apparatus and method for communicating information about the status of a movable barrier, for example, a garage door.” 935 F.3d at 1345. According to the specification, the “difference between the prior art movable barrier operator systems and the claimed movable barrier operator system is that the status information about the system is communicated wirelessly, in order to overcome certain undesirable disadvantages of systems using physical signal paths.” *Id.* at 1346. Because the patent identified wireless communication as “the focus of the claimed advance over the prior art,” the claims were “directed to wirelessly communicating status information about a system.” *Id.* (quotation omitted).

Under *Alice* step one, the Federal Circuit held that “communicating information wirelessly, without more, is an abstract idea.” *Id.* at 1347. “[T]he mere physical nature of [the] claim elements (e.g., controller, interface, and wireless data transmitter) [wa]s not enough to save the claims from abstractness, where the claimed advance is directed to the wireless communication of status information using off-the-shelf technology for its intended purpose.” *Id.* at 1348. Under *Alice* step two, the Federal Circuit held that these physical claim elements were “conventional components, all recited in a generic way.” *Id.* The Federal Circuit held that “[w]ireless communication cannot be an inventive concept here, because it is the abstract idea that the claims are directed to.” *Id.* at 1349. Even if outside the abstract realm, “transmitting information wirelessly was conventional at the time the patent was filed and could be performed with off-the-shelf technology.” *Id.*

Similarly, in *ChargePoint*, the Federal Circuit affirmed a district court judgment on a Rule 12(b)(6) motion holding claims ineligible that were “all directed to the abstract idea of communicating over a network for device interaction.” 920 F.3d at 773. Similar to this case, the patentee asserted four patents with a common specification. *Id.* at 764. “These patents generally

1 describe[d] electric vehicle charging stations that are connected to a network.” *Id.*

2 Under *Alice* step one, the Court found it “clear from the language of claim 1 that the  
3 claim *involves* an abstract idea—namely, the abstract idea of communicating requests to a remote  
4 server and receiving communications from that server, *i.e.*, communication over a network.” *Id.* at  
5 766. To determine whether the claims were “directed to” this abstract idea, the Federal Circuit  
6 “look[ed] to the specification to understand ‘the problem facing the inventor.’” *Id.* at 767. “The  
7 problem identified by the patentee, as stated in the specification, was the lack of a communication  
8 network that would allow drivers, businesses, and utility companies to interact efficiently with the  
9 charging stations.” *Id.* The solution identified in the specification was “the idea of *network-*  
10 *controlled* charging stations.” *Id.* at 768. As the Federal Circuit observed, however,  
11 “communicating over a network for device interaction . . . has been and continues to be a ‘building  
12 block of the modern economy.’” *Id.* at 773 (quoting *Alice*, 573 U.S. at 220). The Federal Circuit  
13 thus held that network communication “is an ‘abstract idea’ beyond the scope of § 101.” *Id.* As in  
14 *Chamberlain*, the mere fact that “the abstract idea is associated with a physical machine that is quite  
15 tangible” did not affect the conclusion that the claims were “‘directed to’ the abstract idea of  
16 communication over a network to interact with network-attached devices.” *Id.* at 770. At step two,  
17 the Federal Circuit explained that, “[i]n essence, the alleged ‘inventive concept’ that solves problems  
18 identified in the field is that the charging stations are network-controlled.” *Id.* at 774. “But network  
19 control is the abstract idea itself” and “cannot supply the inventive concept.” *Id.* (quotation omitted).

20 In *Affinity Labs*, the Federal Circuit affirmed a similar decision granting judgment on the  
21 pleadings that invalidated claims directed to “delivering user-selected media content to portable  
22 devices[,] [which] is an abstract idea.” 838 F.3d at 1269. The claims covered “a network-based  
23 media system with a customized user interface, in which the system delivers streaming content from  
24 a network-based resource upon demand to a handheld wireless electronic device.” *Id.* at 1268.  
25 Under *Alice* step one, “the claims d[id] no more than describe a desired function or outcome, without  
26 providing any limiting detail that confines the claim to a particular solution to an identified  
27 problem,” which “confirms that [they are] directed to an abstract idea.” *Id.* at 1269. Moreover, “[i]t  
28 [wa]s not debatable [ ] that the delivery of media content to electronic devices was well known long

before” the patent-at-issue, including through the use of “transistor radios and portable televisions.” *Id.* at 1270. The Federal Circuit concluded that the “idea of delivering media content to a wireless portable device is one of long standing,” and thus patent-ineligible as an abstract idea. *Id.* Likewise, at step two, nothing in the claims “constitute[d] a concrete implementation of the abstract idea in the form of an ‘inventive concept.’” *Id.* at 1271. Again, the claims were “written in largely functional terms” and “not directed to the solution of a ‘technological problem.’” *Id.* at 1271–72.

Finally, in *Sensormatic*, the Federal Circuit affirmed the grant of a motion for judgment on the pleadings that invalidated five related patents “generally describ[ing] a wireless surveillance system and methods of operation.” 2021 WL 2944838, at \*1. Under *Alice* step one, “the asserted patents [we]re directed to the abstract ideas of wireless communication and remote surveillance.” *Id.* at \*3. Under step two, the claims failed to describe an inventive concept because they merely “[p]rovid[ed] generic devices that communicate with each other,” which is no more than “a conventional application of an abstract idea.” *Id.* The claims were held invalid under § 101. *Id.*<sup>2</sup>

#### **B. The asserted patents fail both steps of the *Alice* framework.**

Koss’s asserted patents are legally indistinguishable from the patents that the Federal Circuit invalidated in *Chamberlain*, *ChargePoint*, *Affinity Labs*, and *Sensormatic*. As shown below, Koss’s patents fail both steps of the *Alice* test as a matter of law and are thus invalid.

##### **1. The claims of the asserted patents are directed to an abstract idea.**

At *Alice* step one, the asserted patents are directed to the abstract idea of wireless communication over a network. As in *Chamberlain* and *ChargePoint*, the specification makes clear that this abstract idea is “the focus of the claimed advance over the prior art.” *Chamberlain*, 935 F.3d at 1346 (quotation omitted); *see also ChargePoint*, 920 F.3d at 767–68.

The one-paragraph “Background” section admits that “[d]igital audio players, such as MP3 players and iPods, that store and play digital audio files, are very popular. Such devices typically

<sup>2</sup> *See also Crandall Techs. LLC v. Vudu, Inc.*, No. 20-CV-04849-VC, 2021 WL 521215, at \*1 (N.D. Cal. Feb. 12, 2021) (invalidating “claims [ ] directed to the abstract idea of transmitting information, including instructions and other types of data, from one device to another” using “an arrangement of generic devices connected through a generic wireless data-sharing network”); *Pebble Tide LLC v. Arlo Techs. Inc.*, No. 19-769-LPS, 2020 WL 509183, at \*1 (D. Del. Jan. 31, 2020) (invalidating claims “directed to the abstract idea of wirelessly outputting data from one device to another”).

1 comprise a data storage unit for storing and playing the digital audio, and a headphone set that  
 2 connects to the data storage unit, usually with a ¼" or a 3.5 mm jack and associated cord." '025 pat.  
 3 1:41–46. The patents also admit that “[o]ften the[se] headphones are in-ear type headphones.” *Id.* at  
 4 1:46–47. The patents allege that “[t]he cord, however, between the headphones and the data storage  
 5 unit can be cumbersome and annoying to users, and the length of the cord limits the physical  
 6 distance between the data storage unit and the headphones.” *Id.* at 1:47–50. According to the  
 7 patents, the only “cordless headphones [that] have been proposed” in the prior art are “quite large  
 8 and not in-ear type headphones.” *Id.* at 1:51–61. Thus, the alleged problem in the prior art that the  
 9 patents purport to address is that conventional in-ear headphones required a cord.

10 To solve this alleged problem, the patents state that “the present invention is directed to a  
 11 wireless earphone that comprises a transceiver circuit for receiving streaming audio from a data  
 12 source, such as a digital audio player or a computer, over an ad hoc wireless network.” *Id.* at 1:65–  
 13 2:2. The patents go on to explain that the claimed in-ear headphones can also connect to other types  
 14 of known wireless networks, such as “common infrastructure wireless network (*e.g.*, a wireless  
 15 LAN)” that, in turn, can connect to “a network-connected content server.” *Id.* at 2:2–16. Thus, the  
 16 alleged invention merely takes the wireless connectivity that already existed for devices that were  
 17 not “in-ear type phones” and applies it to previously wired in-ear phones, resulting in the claimed  
 18 “wireless earphone” that connects to generic, conventional wireless networks. *Id.* at 1:57–66.

19 The patents do not purport to recite any improvement to wireless technology itself. The  
 20 patents admit that the claims can be practiced “using any suitable wireless communication protocol,  
 21 including Wi-Fi (*e.g.*, IEEE 802.11a/b/g/n), WiMAX (IEEE 802.16), Bluetooth, Zigbee, UWB, or  
 22 any other suitable wireless communication protocol.” '025 pat. 4:55–59. Thus, as in *Affinity Labs*,  
 23 the patents do not recite any new “particular mechanism for wirelessly streaming content to a  
 24 handheld device.” 838 F.3d at 1269. They only “describe[] the function of streaming content to a  
 25 wireless device, but not a specific means for performing that function.” *Id.*

26 As shown below, the claims of each asserted patent recite nothing more than the abstract idea  
 27 of wireless communication, as applied to the context of a generic headphone system.  
 28

(a) The '025 patent claims

Claim 1 of the '025 patent (ECF No. 71-1 (FAC Exh. A)), which is the only claim of the '025 patent cited in the Complaint and its sole independent claim, recites as follows:

1. A system comprising:  
 a mobile, digital audio player that stores digital audio content; and  
 a headphone assembly, separate from and *in wireless communication with the mobile digital audio player*, wherein the headphone assembly comprises:  
 first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer;  
*an antenna for receiving wireless signals from the mobile, digital audio player via one or more ad hoc wireless communication links;*  
*a wireless communication circuit connected to the at least one antenna, wherein the at least one wireless communication circuit is for receiving and transmitting wireless signals to and from the headphone assembly;*  
 a processor;  
 a rechargeable battery for powering the headphone assembly; and  
 a microphone for picking up utterances by a user of the headphone assembly; and  
 a remote, network-connected server that is in wireless communication with the mobile, digital audio player;  
 wherein the mobile, digital audio player is for transmitting digital audio content to the headphone assembly *via the one or more ad hoc wireless communication links*, such that the digital audio content received by the headphone assembly from the mobile, digital audio player is playable by the first and second earphones; and  
 wherein the processor is for, upon activation of a user-control of the headphone assembly, initiating transmission of a request to the remote, network-connected server.

'025 pat. claim 1 (emphasis added). Claim 1 thus recites a system comprising a digital audio player and a wireless headphone assembly that communicate with one another wirelessly.

The language of claim 1, read in light of the specification, makes clear that the claim is directed to wireless communication. As discussed above, the specification concedes that “[d]igital audio players” with “a headphone set” were not only known, but “very popular” in the prior art. '025 pat. 1:41–44. The only described difference between these conventional systems and the claimed system is that the latter is “directed to a wireless earphone.” *Id.* at 1:65–66. The wireless connection between the digital audio player and the headphone assembly (which are otherwise conventional) is enabled by the generic “antenna” and “wireless communication circuit” recited in claim 1. '025 pat. claim 1. These elements are analogous to “the wireless status condition data transmitter” that the Federal Circuit focused on in *Chamberlain* to hold that the claims were “directed to wirelessly communicating status information.” 935 F.3d at 1346.

Every other element in the claim—e.g., “processor,” “rechargeable battery,” “microphone,” “network-connected server,” etc.—is a generic, functionally recited component of any conventional audio or computer system. Nothing in the patent suggests that these elements embody any technological improvement. At most, they “merely limit[] the field of use of the abstract idea to a particular existing technological environment”—i.e., audio systems with headphones—which “does not render the claims any less abstract.” *Id.* at 1348. Because “the focus of the claimed advance over the prior art” is adding wireless capability, “the claim’s character as a whole is directed to excluded subject matter.” *Id.* at 1346 (quotation omitted); *see also Yu v. Apple Inc.*, 1 F.4th 1040, 1043 (Fed. Cir. 2021) (invalidating claim reciting “two image sensors, two lenses, an analog-to-digital converting circuitry, an image memory, and a digital image processor,” which “perform only their basic functions . . . and are set forth at a high degree of generality”); *Automated Tracking Sols., LLC v. Coca-Cola Co.*, 723 F. App’x 989, 994 (Fed. Cir. 2018) (invalidating claim reciting “an antenna with a first coverage area, a first transponder, a reader, a processor, and a storage device” because these conventional components were used to carry out an abstract idea).

“The purely functional nature of the claim confirms that it is directed to an abstract idea.” *Affinity Labs*, 838 F.3d at 1269. In *Affinity Labs*, the claim recited “(1) a ‘media managing system’ that maintains a library of content, (2) a ‘collection of instructions’ that are ‘operable when executed’ by a handheld wireless device to request streaming delivery of the content, and (3) a ‘network based delivery resource’ that retrieves and streams the requested content to the handheld device.” *Id.* Similarly, claim 1 of the ’025 patent recites (1) a “digital audio player that stores digital audio content,” (2) a wireless headphone assembly, and (3) “ad hoc wireless communication links” that transmit data from the digital audio player to the headphone assembly. ’025 pat. claim 1. “At that level of generality, the claims do no more than describe a desired function or outcome, without providing any limiting detail that confines the claim to a particular solution to an identified problem” beyond the idea of wireless communication. *Affinity Labs*, 838 F.3d at 1269.

The final “wherein” clause, which provides that “the processor is for, upon activation of a user-control of the headphone assembly, initiating transmission of a request to the remote, network-connected server,” reinforces this analysis. ’025 pat. claim 1. In *ChargePoint*, the Federal Circuit

1 invalidated claims directed to “the abstract idea of communicating requests to a remote server and  
 2 receiving communications from that server, *i.e.*, communication over a network.” 920 F.3d at 766.  
 3 That is analogous to the claimed “transmission of a request to the remote, network-connected server”  
 4 here. ’025 pat. claim 1. The clause simply limits “the claims to a particular field of information—  
 5 here, [requests to a remote server]—[which] does not move the claims out of the realm of abstract  
 6 ideas.” *SAP*, 898 F.3d at 1169. The claimed server request is merely another form of wirelessly  
 7 transmitted “information,” which is “intangible” and “within the realm of abstract ideas.” *Id.* at  
 8 1167 (quotation omitted); *see also Dropbox*, 815 F. App’x at 537 (“transmitting data” and “remote  
 9 server synchronization for wirelessly backing up data’ . . . reveal[ed] an abstract idea”); *iLife Techs.,*  
 10 *Inc. v. Nintendo of Am., Inc.*, 839 F. App’x 534, 536 (Fed. Cir. 2021) (invalidating claim “directed to  
 11 the abstract idea of ‘gathering, processing, and transmitting information’”).

12 The dependent claims fare no better. They recite only minor details, which do not alter the  
 13 claimed invention’s focus on wireless communication—*i.e.*, sourcing audio content from either the  
 14 digital audio player or the network (claims 2, 11, 12, 21, 30, 42); wirelessly transmitting  
 15 microphone-based signals (claims 3, 6, 13, 16, 22, 25, 31, 34, 43, 46); transitioning between wireless  
 16 networks (claims 4, 5, 7, 9, 14, 15, 17, 19, 23, 24, 26, 28, 32, 33, 35, 37, 44, 45, 47, 49, 50);  
 17 transmitting data to a remote device (claims 8, 18, 27, 36, 48); receiving firmware upgrades (claims  
 18 10, 38, 51); a wire between the earphones (claim 11); a headband (claim 20); the shape of in-ear  
 19 headphones or earbuds (claims 29, 39, 40, 53–56); a docking station for charging (claim 41); and an  
 20 integrated circuit for the processor and wireless communication circuit (claim 52). For all of these  
 21 claims, which repetitively add only trivial details, the focus of the claimed advance over the prior art  
 22 remains the addition of wireless communication over a network. All claims are thus abstract.

### 23 (b) The ’155 patent claims

24 Claim 1 of the ’155 patent (ECF No. 71-2 (FAC Exh. B)), which is the only claim of the ’155  
 25 patent cited in the Complaint and its sole independent claim, recites as follows:

- 26 1. A wireless headphone assembly comprising:  
 27 first and second earphones, wherein each of the first and second earphones comprises  
 28 an acoustic transducer;  
*an antenna for receiving wireless signals;*

1 *a wireless communication circuit connected to the antenna, wherein the wireless*  
 2 *communication circuit is for receiving and transmitting wireless signals to and*  
 3 *from the wireless headphone assembly;*  
 4 a processor in communication with the wireless communication circuit; and  
 5 a rechargeable battery for powering the wireless headphone assembly,  
 6 wherein the headphone assembly is configured, with the processor, to transition  
 7 automatically from *playing digital audio content received wirelessly by the*  
 8 *headphone assembly via a first wireless network to playing digital audio content*  
 9 *received wirelessly by the headphone assembly via a second wireless network.*

10 '155 pat. claim 1 (emphasis added).

11 Like claim 1 of the '025 patent, claim 1 of the '155 patent recites wireless headphones that  
 12 transmit signals to and from a digital audio player over a wireless network. For all the same reasons  
 13 discussed above, the generic “antenna” and “wireless communication circuit” are the only  
 14 components that distinguish conventional headphone systems as described in the patent, which  
 15 confirms that these elements are the focus of the claim as a whole. *See Chamberlain*, 935 F.3d at  
 16 1346 (focusing on “the wireless status condition data transmitter” at *Alice* step one). The remaining  
 17 components—*e.g.*, “earphones,” “processor,” and “rechargeable battery”—are merely generic,  
 18 conventional components of any audio headphone system, and are recited only at a high “level of  
 19 generality” in a “purely functional” manner. *Affinity Labs*, 838 F.3d at 1269.

20 The main difference between the '025 and '155 patents is that, instead of transmitting  
 21 requests to a remote server, the '155 patent's claimed system is “configured . . . to transition  
 22 automatically from playing digital audio content received wirelessly by the headphone assembly via  
 23 a first wireless network to playing digital audio content received wirelessly by the headphone  
 24 assembly via a second wireless network.” '155 pat. claim 1. In other words, the system can  
 25 communicate with either of two wireless networks—“a first wireless network” or “a second wireless  
 26 network.” *Id.* The focus of the claim thus remains squarely on wireless communication. Moreover,  
 27 the claim does not purport to limit *how* the invention “transition[s] automatically” between wireless  
 28 networks; it merely states that the system can do so as an intended *result*. Where, as here, a claim  
 recites “a desired function or outcome, without providing any limiting detail that confines the claim  
 to a particular solution to an identified problem,” the claim is clearly “directed to an abstract idea,  
 not to a concrete embodiment of that idea.” *Affinity Labs*, 838 F.3d at 1269.

None of the dependent claims deviate from claim 1's focus on wireless communication. At most, they recite only minor details for the claimed wireless headphone system—*i.e.*, transmitting a request to a remote server (claim 2); wirelessly transmitting microphone-based signals (claim 3); wireless earbuds with conventional components (claims 4, 5, 7, 8); a headband (claim 6); a hanger bar on the outer ear (claim 9); a docking station for charging (claim 10); transitioning wireless networks based on signal strength (claims 11, 12); receiving firmware upgrades (claim 13); and a generic memory unit (claim 14). For all these claims, the focus of the claimed advance over the prior art remains the addition of wireless communication over a network, which is abstract.

**(c) The '934 patent claims**

The '934 patent (ECF No. 71-3 (FAC Exh. C)) has two independent claims—claim 1 and claim 58. Claim 1 is the only claim of the '934 patent cited in the Complaint and recites as follows:

1. A headphone assembly comprising:  
 first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer; and  
*an antenna for receiving wireless signals from a mobile, digital audio player via one or more ad hoc wireless communication links;*  
*a wireless communication circuit connected to the antenna, wherein the wireless communication circuit is for receiving and transmitting wireless signals to and from the headphone assembly;*  
 a processor;  
 a memory for storing firmware that is executed by the processor;  
 a rechargeable battery for powering the headphone assembly; and  
 a microphone for picking up utterances by a user of the headphone assembly; and  
 wherein the headphone assembly is configured to play, by the first and second earphones, digital audio content *transmitted by the mobile, digital audio player via the one or more ad hoc wireless communication links;*  
 wherein the processor is configured to, upon activation of a user-control of the headphone assembly, initiate transmission of a request to a remote, network-connected server that is *in wireless communication with the mobile, digital audio player;* and  
 wherein the headphone assembly is for receiving firmware upgrades transmitted from the remote, network connected server.

'934 pat. claim 1 (emphasis added).

As in the '025 and '155 patents, claim 1 of the '934 patent recites wireless headphones that transmit signals to and from a digital audio player over a wireless network. Again, for the same reasons discussed above, the generic "antenna" and "wireless communication circuit" are the only components that differ from conventional audio headphone systems as described in the patent, and

the remaining components—*e.g.*, “earphones,” “processor,” “memory,” and “rechargeable battery”—are all generic, conventional claim elements that are recited only at a high “level of generality” in a “purely functional” manner. *Affinity Labs*, 838 F.3d at 1269.

Beyond these limitations, and similar to the ’025 patent discussed above, claim 1 limits certain information that is wirelessly transmitted to “a request to a remote, network-connected server,” and limits certain information that is wirelessly received to “firmware upgrades.” ’934 pat. claim 1. Again, however, “communicating requests to a remote server and receiving communications from that server” is itself an “abstract idea” (*ChargePoint*, 920 F.3d at 766), and merely limiting “the claims to a particular field of information—here, [remote requests and firmware upgrades]—does not move the claims out of the realm of abstract ideas” (*SAP*, 898 F.3d at 1169). Claim 1 is thus directed to the abstract idea of wireless communication over a network.

The second independent claim of the ’934 patent, claim 58, recites as follows:

58. A headphone assembly comprising:  
 first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer; and  
*an antenna for receiving wireless signals from a mobile, digital audio player via one or more ad hoc wireless communication link*, wherein the mobile, digital audio player is a first digital audio source;  
*a wireless communication circuit connected to the antenna, wherein the wireless communication circuit is for receiving and transmitting wireless signals to and from the headphone assembly*;  
 a processor;  
 a rechargeable battery for powering the headphone assembly; and  
 a microphone for picking up utterances by a user of the headphone assembly; and  
 wherein the headphone assembly is configured to play, by the first and second earphones, digital audio content transmitted by the mobile, digital audio player *via the one or more ad hoc wireless communication links*;  
 wherein the processor is configured to, upon activation of a user-control of the headphone assembly, initiate transmission of a request to a remote, network-connected server that is *in wireless communication with the mobile, digital audio player*; and  
 wherein the headphone assembly transitions to play digital audio content received wirelessly from a second digital audio source via a second wireless communication link based on, at least, a signal strength level for the second wireless communication link, wherein the second digital audio source is different from the first digital audio source.

’934 pat. claim 58 (emphasis added). Like claim 1, claim 58 focuses on wireless communication. It

1 recites, again, a wireless headphone system that communicates wirelessly with a digital audio player.  
 2 The main difference between claim 58 and claim 1 is that the headphones of claim 58 are configured  
 3 to “transition[] to play digital audio content received wirelessly from a second digital audio source  
 4 via a second wireless communication link based on, at least, a signal strength level for the second  
 5 wireless communication link, wherein the second digital audio source is different from the first  
 6 digital audio source.” *Id.* In other words, the claimed headphones can purportedly switch between  
 7 two wireless networks based on which one has a stronger signal.

8 In *Cisco Systems, Inc. v. Uniloc 2017 LLC*, the Federal Circuit invalidated nearly identical  
 9 claims because they “were directed to the abstract idea of ‘ranking stations based on antenna  
 10 performance characteristics and selecting the station with the highest rank to act as master in a  
 11 network’”—*i.e.*, “the abstract idea of selecting the highest ranked station.” 813 F. App’x 495, 497  
 12 (Fed. Cir. 2020). Claim 58 is no different. It simply states that the headphones switch networks  
 13 “based on, at least, a signal strength level,” without providing any detail on *how* the headphones  
 14 accomplish this. ’934 pat. claim 58. “The claim does not specify any particular metric or method  
 15 for ranking. The entirety of the claim is simply the abstract idea and nothing more.” *Cisco*, 813 F.  
 16 App’x at 498. “At that level of generality, the claims do no more than describe a desired function or  
 17 outcome,” which “confirms that it is directed to an abstract idea.” *Affinity Labs*, 838 F.3d at 1269.  
 18 “Adding one abstract idea ([wireless communication]) to another abstract idea ([ranking signal  
 19 strength]) does not render the claim non-abstract.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d  
 20 1322, 1327 (Fed. Cir. 2017); *accord ChargePoint*, 920 F.3d at 771–72.

21 The dependent claims of the ’934 patent are also directed to the same abstract subject matter,  
 22 adding only minor details that do not change the focus of claims 1 and 58—*i.e.*, sourcing audio  
 23 content from either the digital audio player or the network (claims 2, 15, 24, 36, 59); wirelessly  
 24 transmitting microphone-based signals (claims 3, 5, 11, 16, 19, 25, 28, 37, 39, 60); transitioning  
 25 between wireless networks (claims 4, 6, 8, 12, 13, 17, 18, 20, 22, 26, 27, 29, 31, 38, 40, 41, 44);  
 26 transmitting data to a remote device (claims 7, 21, 30, 45, 61); receiving firmware upgrades (claims  
 27 9, 46, 62); a wire between the earphones (claim 10); a headband (claim 14); the shape of in-ear  
 28 headphones or earbuds (claims 23, 34, 42, 48–51); a wireless circuit in each earphone or earbud

(claims 32, 33); a docking station for charging (claims 35, 43); an integrated circuit for the processor and the wireless communication circuit (claim 47); generic “sound quality enhancement” (claims 52, 56); a generic “baseband processor circuit” (claims 53, 57); and separate circuits for the earphones or earbuds (claims 54, 55). All claims of the ’934 patent are thus directed to an abstract idea.

**(d) The ’325 patent claims**

Claim 1 of the ’325 patent (ECF No. 71-4 (FAC Exh. D)), which is the only claim of the ’325 patent cited in the Complaint and its sole independent claim, recites as follows:

1. Headphones comprising:
  - a pair of first and second **wireless earphones** to be worn simultaneously by a user, wherein the first and second earphones are separate such that when the headphones are worn by the user, the first and second earphones are not physically connected, wherein each of the first and second earphones comprises:
    - a body portion;
    - an earbud extending from the body portion that is inserted into an ear of the user when worn by the user;
    - a curved hanger bar connected to the body portion, wherein the curved hanger bar comprises a portion that rests upon an upper external curvature of an ear of the user behind an upper portion of an auricula of the ear of the user;
    - a wireless communication circuit for receiving and transmitting wireless signals;**
    - a processor circuit connected to the wireless communication circuit;
    - at least one acoustic transducer for producing audible sound from the earbud;
    - a microphone for picking up utterances of a user of the headphones;
    - an antenna connected to the wireless communication circuit;** and
    - a rechargeable power source; and
  - a docking station for holding at least the first wireless earphone, wherein the docking station comprises a power cable for connecting to an external device to power the docking station, and wherein the docking station is for charging at least the first wireless earphone when the first wireless earphone is placed in the docking station.

’325 pat. claim 1 (emphasis added). Similar to the claims discussed above, claim 1 of the ’325 patent focuses on wireless earphones that receive and transmit wireless signals using a generic “antenna” and a generic “wireless communication circuit.” *Id.*

The difference between this claim and those discussed above is that this one recites some other minor physical details—*i.e.*, the headphones are shaped to be “inserted into an ear of the user,” and the system comprises “a docking station.” *Id.* The “Background” section of the patents, however, admits that these characteristics were conventional: “Often the headphones are in-ear type headphones” in prior systems, and other systems had “a docking port.” ’325 pat. 1:52–53, 1:57–60.

1 The only distinction between the claims and these prior systems is that “the present invention is  
 2 directed to a wireless earphone,” whereas prior in-ear headphone systems lacked wireless capability.  
 3 *Id.* at 2:3–4, 1:48–67. Thus, as in *ChargePoint*, the claim’s “various physical components” do not  
 4 change the analysis: “[T]he specification does not suggest that the inventors’ discovery was the  
 5 particular arrangement of components claimed. . . . The only improvement alleged is use of the  
 6 concept of network communication to interact with the particular devices. This remains the focus  
 7 of” the claim, which is “an abstract idea.” 920 F.3d at 772–73.

8 The dependent claims share this same focus. As with the other asserted patents, they add  
 9 only minor, abstract details—*i.e.*, a buffer for caching streaming audio (claims 2, 6, 13, 14);  
 10 transmitting or receiving requests to and from a remote server (claims 3, 4); transitioning between  
 11 wireless networks (claims 5, 11); generic “sound quality enhancement” and a “baseband processor”  
 12 (claims 7, 12, 18); a wireless rechargeable power source (claims 8, 16, 17); receiving firmware  
 13 upgrades (claims 9, 10); and wirelessly transmitting microphone-based signals (claim 15).

#### 14 (e) The ‘498 patent claims

15 Claim 1 of the ‘498 patent (ECF No. 71-10 (FAC Exh. J)), which is the only claim of the  
 16 ‘498 patent cited in the FAC and its sole independent claim, recites as follows:

17 1. Headphones comprising:  
 18 a pair of first and second **wireless earphones** to be worn simultaneously by a user, wherein  
 19 each of the first and second wireless earphones comprises at least one acoustic transducer  
 20 for producing audible sound;  
 21 wherein the first wireless earphone comprises a first system-on-chip (SOC), wherein the first  
 22 SOC comprises:  
 23 a first **wireless communication circuit for receiving and transmitting wireless signals**;  
 24 a first processor circuit connected to the first wireless communication circuit; and  
 25 a first memory unit in communication with the first processor circuit for storing firmware  
 26 updates pushed to the headphones from a remote network server;  
 27 wherein the first wireless communication circuit is for **receiving audio content streamed**  
 28 **wirelessly to the headphones** from a first audio content source, such that the first and  
 second wireless earphones play the audio content streamed wirelessly to the headphones;  
 and  
 wherein the first processor circuit is configured to, in response to detecting **an incoming**  
**wireless communication** to the headphones:  
 mute the audio content streamed wirelessly to the headphone being played by the  
 headphones; and  
**output audio of the incoming wireless communication circuit** via the first and second  
 wireless earphones.

‘498 pat. claim 1 (emphasis added). Thus, like the claims above, claim 1 recites wireless earphones

1 comprising a wireless communication circuit that receives and outputs audio content wirelessly.

2 In particular, claim 1 of the '498 patent is similar to claim 1 of the '934 patent discussed  
3 above. Claim 1 of the '498 patent states that the types of information that are wirelessly transmitted  
4 to the headphones include “firmware updates pushed to the headphones from a remote network  
5 server,” whereas claim 1 of the '934 patent states that the headphones “receiv[e] firmware upgrades  
6 transmitted from the remote, network connected server.” Again, “communicating requests to a  
7 remote server and receiving communications from that server” is an “abstract idea” (*ChargePoint*,  
8 920 F.3d at 766), and limiting it to “a particular field of information—[e.g., firmware updates]—  
9 does not move the claims out of the realm of abstract ideas” (*SAP*, 898 F.3d at 1169).

10 Claim 1 of the '498 patent is also similar to claim 1 of the '155 patent in that it refers to  
11 switching from playing “audio content streamed wirelessly to the headphone” to “audio of the  
12 incoming wireless communication.” In both claims, the focus is squarely on wireless  
13 communication—e.g., on the abstract idea of switching from one wireless communication to  
14 another. Again, a claim that merely recites such “a desired function or outcome, without providing  
15 any limiting detail,” is “directed to an abstract idea.” *Affinity Labs*, 838 F.3d at 1269.

16 In terms of claim language, the main difference between the '498 patent and the '934 and  
17 '155 patents is that, in the '498 patent, the conventional electronics that are used to wirelessly  
18 transmit information (e.g., audio or firmware updates) are on a generic “system-on-chip (SOC).”  
19 '498 pat. claim 1. The only mention of this element in the specification is a single sentence that  
20 “[i]n various embodiments, the transceiver circuit 100 may be implemented as a single integrated  
21 circuit (IC), such as a system-on-chip (SoC), which is conducive to miniaturizing the components of  
22 the earphone 10, which is advantageous if the earphone 10 is to be relatively small in size, such as an  
23 in-ear earphone (see FIGS. 1A-1B for example).” '498 pat. 6:45–50. No integrated circuits are  
24 described, and the patent treats the recited “system-on-chip” as a general-purpose computer, which  
25 does not take the claims outside the abstract realm. *See Alice*, 573 U.S. at 223 (“if a patent’s  
26 recitation of a computer amounts to a mere instruction to implement an abstract idea on a computer,  
27 that addition cannot impart patent eligibility”) (quotations, alterations omitted); *Kaavo Inc. v.*  
28 *Cognizant Tech. Sols. Corp.*, No. 14-1192-LPS-CJB, 2016 WL 476730, at \*9 (D. Del. Feb. 5, 2016)

(for patent disclosing “one or more integrated circuits,” “[u]sing generic computing technology to practice the abstract idea is insufficient to make claim 1 patent eligible”).

The dependent claims are equally abstract. They recite only minor details, which do not alter the claimed invention’s focus on wireless communication—*i.e.*, a “second” set of generic “SOC,” “wireless communication circuit,” “processor circuit,” and “memory unit” (claim 2); “separate” earphones that are “not physically connected,” *i.e.*, wireless (claim 3); “receiv[ing] the firmware updates wirelessly” (claims 4, 10); a “rechargeable power source” (claims 5, 17, 18); “an earbud” (claims 6, 9, 20); a generic “buffer that caches the audio content” (claim 7); a generic “docking station” (claim 8); a generic “microphone” (claims 11, 14, 24, 25); “a remote network server” (claim 12); generic “sound quality enhancement” (claims 13, 19); generic “noise cancelling” (claim 15); transitioning between wireless networks (claims 16, 23); and transmitting or receiving data to or from a remote device (claims 21, 22, 26). For all these claims, which recite only trivial details, the focus of the claimed advance over the prior art remains the addition of wireless communication.

#### (f) The ’852 patent claims

Finally, claim 1 of the ’852 patent (ECF No. 71-11 (FAC Exh. K)), which is the sole independent claim, recites as follows:

1. A system comprising:  
*wireless headphones* comprising first and second earphones; and  
 a mobile computer device that is *in wireless communication with*, and untethered to, the wireless headphones, wherein the mobile computer device is *for wirelessly pairing* with the wireless headphones such that the wireless headphones play audio content *transmitted wirelessly* to the wireless headphones from the mobile computer device, wherein the mobile computer device is for wirelessly pairing with the wireless headphones *via an ad hoc wireless communication link* between the mobile computer device and the wireless headphones, and wherein the ad hoc wireless communication link comprises a Bluetooth wireless communication link; and  
 wherein the mobile computer device comprises a screen that is configured to display a graphical user interface through which a user of the wireless headphones selects an audio control setting for the wireless headphones to be applied to the wireless headphones when the wireless headphones play the audio content, and wherein the wireless headphones *receive the audio control setting via a wireless data communication link*.

’852 pat. claim 1 (emphasis added).

Like claim 1 of the ’498 patent, claim 1 of the ’852 patent recites wireless earphones that transmit signals to and from a remote device (*e.g.*, a general-purpose computer) over a wireless

1 network. For the same reasons discussed above, the “ad hoc wireless communication link” and  
 2 “wireless data communication link” are the only components that distinguish conventional  
 3 headphone and computer systems as described in the patent, which confirms that these elements are  
 4 the focus of the claim. *See Chamberlain*, 935 F.3d at 1346 (focusing on “the wireless status  
 5 condition data transmitter” at *Alice* step one). The remaining elements—*e.g.*, a “mobile computer  
 6 device” with a “screen”—are merely functional components of a general-purpose computer, which  
 7 “cannot impart patent eligibility.” *Alice*, 573 U.S. at 223 (quotation omitted).

8 The main differences between the ’498 patent and the ’852 patent are that (i) the ’852 patent  
 9 does not even recite a conventional processor for the headphones; and (ii) the last clause of claim 1  
 10 of the ’852 patent recites “a graphical user interface through which a user of the wireless headphones  
 11 selects an audio control setting for the wireless headphones to be applied to the wireless headphones  
 12 when the wireless headphones play the audio content,” which “the wireless headphones receive . . .  
 13 via a wireless data communication link.” ’852 pat. claim 1. In *Affinity Labs*, however, the Federal  
 14 Circuit made clear that merely reciting “a ‘graphical user interface’” does not confer eligibility  
 15 because it simply reflects “well-known computer components.” 838 F.3d at 1270. Indeed, even  
 16 reciting “a ‘customized user interface’” is insufficient where the claim is “not limited to any  
 17 particular form of customization.” *Id.* at 1271. Here the claimed interface is even more abstract than  
 18 the one in *Affinity Labs*, which required a “graphical user interface for the network based media  
 19 managing system” that “facilitate[d] a user selection of content included in the library” and  
 20 transmitted “a request for a streaming delivery of the content.” *Id.* at 1268. By contrast, the ’852  
 21 patent merely recites an interface that allows a user to “select[] an audio control setting” that is  
 22 wirelessly transmitted to the headphones. ’852 pat. claim 1. That is a purely generic functionality  
 23 that, at most, is “directed to the abstract idea of migration, or transitioning, of settings.” *Tranxition,*  
 24 *Inc. v. Lenovo (United States) Inc.*, 664 F. App’x 968, 972 (Fed. Cir. 2016).

25 Claim 1 of the ’852 patent also recites “a Bluetooth wireless communication link,” but the  
 26 specification admits that Bluetooth, among other “wireless communication protocol[s],” was known.  
 27 ’852 pat. claim 1, 5:7–12. The patent “makes no claim that [Koss] invented” Bluetooth, “nor does it  
 28 suggest that [its use], at that level of generality, were unknown in the art as of the priority date of the

1 '[852] patent.' *Affinity Labs*, 838 F.3d at 1270. This does not impart any technological advance to  
 2 the claim. *See Cisco*, 813 F. App'x at 499 (holding ineligible claim that "uses known computer  
 3 hardware and wireless protocols (like Bluetooth)") (alterations omitted).

4 The dependent claims of the '852 patent are equally abstract and recite only minor,  
 5 conventional variations on the independent claim that are merely recited in terms of their function or  
 6 desired result—*i.e.*, "a treble setting for the wireless headphones" (claim 2); "a bass setting for the  
 7 wireless headphones" (claim 3); "a frequency setting for the wireless headphones" (claim 4); "a  
 8 noise cancellation setting for the wireless headphones" (claim 5); "the user interface comprises a  
 9 webpage" (claim 6); "a[] remote streaming audio content source" (claim 7); the headphones "are  
 10 physically separate" and "not physically connected" (claim 8); a generic "transducer," "processor  
 11 circuit," "wireless communication circuit," "microphone," and "rechargeable battery" (claim 9);  
 12 "earbud[s]" (claims 10, 18); transmitting requests and receiving responses to and from "a remote  
 13 network server" (claim 11); "memories" for storing "firmware upgrades" (claim 12); transmitting  
 14 data based on microphone input (claim 13); a "buffer that caches the audio content" (claim 14);  
 15 generic "sound quality enhancement" (claim 15); "output[ting] audio of the incoming wireless  
 16 communication" (claim 16); a generic "hanger bar" (claim 17); a generic "docking station" (claim  
 17 19); and wirelessly transmitting to "a second earphone set" (claim 20). Again, these claims recite  
 18 only trivial details, and the focus of the claimed advance remains wireless communication.

## 19 2. The claims of the asserted patents fail to recite an inventive concept.

20 At *Alice* step two, on their face, the claims recite no inventive concept outside the abstract  
 21 realm. As discussed above, apart from variations on the abstract idea of wireless communication  
 22 itself, the claims recite only generic components of conventional headphones or computer network  
 23 systems described solely in terms of their function, such as "earphones," "processor circuit,"  
 24 "memory unit," "audio content source," "battery," "microphone," etc. "Providing generic devices  
 25 that communicate with each other, however, is a conventional application of an abstract idea."  
 26 *Sensormatic*, 2021 WL 2944838, at \*3. "These conventional components, all recited in a generic  
 27 way, are no[t] [ ] equipped to save the claim from abstractness." *Chamberlain*, 935 F.3d at 1348.

28 The patents' common specification supports this result. Again, the patents admit that the

claims can be practiced “using any suitable wireless communication protocol, including Wi-Fi (e.g., IEEE 802.11a/b/g/n), WiMAX (IEEE 802.16), Bluetooth, Zigbee, UWB, or any other suitable wireless communication protocol.” ’025 pat. 4:55–59. Thus, “the specification makes clear that transmitting information wirelessly was conventional at the time the patent was filed and could be performed with off-the-shelf technology.” *Chamberlain*, 935 F.3d at 1349. The patents also admit that “operating system details for the various computer-related devices and systems are not described” because they are found in “a typical processor or computer system” and “are well known in the art.” ’025 pat. 16:45–50. Likewise, the patents admit that the claimed functions “may be executed by a processor or any other similar computing device”; “embodiments described herein may be implemented in computer software using any suitable computer software language type”; and “the processes associated with the present embodiments may be executed by programmable equipment, such as computers or computer systems and/or processors.” *Id.* at 16:56–17:10.

“From the claims and the specification, it is clear that [wireless] network communication is the only possible inventive concept.” *ChargePoint*, 920 F.3d at 775. But an alleged advance that “merely mirrors the abstract idea itself . . . cannot supply an inventive concept.” *Id.* at 774. “Wireless communication cannot be an inventive concept here, because it is the abstract idea that the claims are directed to.” *Chamberlain*, 935 F.3d at 1349. Even if adding wireless capability to in-ear headphones were “groundbreaking, innovative, or even brilliant, [ ] that is not enough for eligibility” because “the advance lies entirely in the realm of abstract ideas, with no plausibly alleged innovation in the non-abstract application realm.” *SAP*, 898 F.3d at 1163 (quotation omitted).

No factual issues weigh against a holding of ineligibility as a matter of law. The FAC does not allege that the claims contain any inventive concept. On the contrary, it admits that stereo headphones have been known since at least the 1950s (ECF No. 71, ¶¶ 15–16) and that wireless technology has been used for audio equipment since at least the 1980s (*id.* ¶ 28). At most, the FAC describes Koss’s purported inventive insight as “recogniz[ing] that the future was a wireless world,” which Koss merely applied to its existing “area of expertise: the headphone.” *Id.* ¶ 36. As for the asserted patents themselves, the FAC generically states that each one “describes in technical detail each of the limitations of the claims, allowing a skilled artisan to understand the scope of the claims

1 and how the non-conventional and non-generic combination of claim limitations is patentably  
 2 distinct from and improved upon what may have been considered conventional or generic in the art  
 3 at the time of the invention.” *Id.* ¶¶ 64, 77, 90, 103, 116, 129. The Federal Circuit has rejected  
 4 attempts to generate factual disputes based on such boilerplate: To the extent this statement is an  
 5 “allegation about inventiveness,” it is “wholly divorced from the claims or the specification [and  
 6 thus] does not defeat a motion to dismiss; only plausible and specific factual allegations that *aspects*  
 7 *of the claims* are inventive are sufficient.” *Dropbox*, 815 F. App’x at 538 (quotation omitted).

8 Apart from this boilerplate statement that the FAC echoes for each asserted patent, the FAC  
 9 summarizes how the specification “generally describes” the claimed wireless earphones systems and  
 10 then states that “[v]arious additional functional and hardware limitations are described and claimed  
 11 in the dependent claims of the [Asserted] Patent.” ECF No. 71 ¶¶ 63, 76, 89, 102, 115, 128. For the  
 12 ’498 patent only—and not for any other patent—the FAC states that the claimed invention represents  
 13 “a specific improvement to the art,” yet never explains what it is that the claims supposedly  
 14 “improve[],” let alone how or why. *Id.* ¶ 115. This statement is no different than the “conclusory  
 15 allegation” in *Dropbox* that the claimed invention ““solved the[] problems”” in the prior art and that  
 16 the patent ““describes and claims a number of novel and inventive approaches.”” 815 F. App’x at  
 17 538. “These sorts of conclusory pleadings are insufficient to survive a motion to dismiss.” *Id.*<sup>3</sup>

18 <sup>3</sup> This Court and others have rejected allegations that are even *more* detailed than those in the FAC.  
 19 See, e.g., *Aftechmobile Inc. v. Salesforce.com, Inc.*, No. 19-CV-05903-JST, 2020 WL 6129139, at \*9  
 20 (N.D. Cal. Sept. 2, 2020), *aff’d*, 853 F. App’x 669 (Fed. Cir. 2021) (“The allegations in the operative  
 21 complaint, which state that the asserted claims do recite how to perform an inventive function, are  
 22 inconsistent with the claim language and, therefore, are not entitled to a presumption of truth.”);  
 23 *Coop. Entm’t, Inc. v. Kollektive Tech., Inc.*, No. 5:20-CV-07273-EJD, 2021 WL 2531069, at \*6  
 24 (N.D. Cal. June 21, 2021) (complaint alleged “a problem” in the prior art and “benefits of the  
 25 purported invention,” but this was “not grounded in the patent specification or file history” and  
 26 “amount[ed] to nothing more than improved efficiency, not an inventive concept”); *Software Rts.*  
 27 *Archive, LLC v. Facebook, Inc.*, 485 F. Supp. 3d 1096, 1112 (N.D. Cal. 2020) (rejecting “detailed  
 28 allegations in the operative complaint regarding visual display improvements” due to the lack of  
 “inclusion of the[se] details . . . in the asserted claims”); *Rothschild Dig. Confirmation, LLC v.*  
*Skedulo Holdings Inc.*, No. 3:19-CV-02659-JD, 2020 WL 1307016, at \*2 (N.D. Cal. Mar. 19, 2020)  
 (allegation that ““the combination of a user verification module, capture module, locational  
 information module, date and time module, processing module and encryption module [ ] represent  
 an inventive concept that was not well-understood, routine, or conventional” was “not enough to  
 create a factual dispute”); *Yanbin Yu v. Apple Inc.*, 392 F. Supp. 3d 1096, 1107 (N.D. Cal. 2019)  
 (complaint “describ[ing] multiple sensors and lenses” deemed “entirely conclusory”); see also

**C. Dismissal should be with prejudice and without leave to further amend.**

Because the asserted patents fail both steps of *Alice* on their face, the FAC should be dismissed under Rule 12(b)(6). *E.g.*, *ChargePoint*, 920 F.3d at 763. Although courts sometimes grant leave to amend after dismissing an original complaint on § 101 grounds, here there are two reasons why leave to amend should be denied, and dismissal of the FAC should be with prejudice.

First, Koss has *already* amended its complaint in response to Poly’s § 101 arguments: Koss filed the FAC after Poly filed a motion for judgment on the pleadings that raised the same § 101 arguments in this motion (ECF No. 62) and after Koss responded on the merits (ECF No. 69). Because Koss has already had the opportunity to try to “amend around *Alice* . . . [but] did not succeed,” the FAC should be “dismissed with prejudice.” *Yu v. Apple Inc.*, No. 3:18-CV-06181-JD, 2020 WL 1429773, at \*7 (N.D. Cal. Mar. 24, 2020), *aff’d*, 1 F.4th 1040 (Fed. Cir. 2021) (citing *S.F. Herring Assoc. v. Dep’t of the Interior*, 946 F.3d 564, 582 (9th Cir. 2019) (“discretion to deny leave to amend is particularly broad where the plaintiff has previously amended the complaint”)).

Second, any attempt to further amend the FAC would be futile. As discussed above, (i) the claims on their face are directed to an abstract idea, (ii) nothing they recite is outside the abstract realm, and (iii) the specification admits that any technology required to practice the abstract idea (*e.g.*, Bluetooth or another wireless protocol) was conventional. *E.g.*, ’025 pat. 4:54–59, 1:57–59. In short, Koss’s claims are “invalid as a matter of law under § 101,” and “[p]articularly in light of the patent specification itself and its disclosure [that both headphone and wireless technology were known] in the prior art, . . . permitting leave for [Koss] to file an[other] amended complaint would be futile.” *Accelerated Memory Tech, LLC v. Hulu, LLC*, No. CV 19-8968 PSG (SKX), 2020 WL 1934979, at \*7 (C.D. Cal. Jan. 8, 2020) (granting dismissal with prejudice).

**V. CONCLUSION**

Koss’s First Amended Complaint (ECF No. 71) should be dismissed with prejudice.

*Abhyanker v. Airbnb, Inc.*, No. 20-CV-08248-JST, 2021 WL 4499413, at \*5 (N.D. Cal. July 8, 2021) (“allegations in the complaint regarding the novelty of the claimed invention cannot prevent dismissal”); *Content Aggregation Sols. LLC v. Blu Prods., Inc.*, No. 3:16-CV-00527-BEN-KSC, 2016 WL 6995490, at \*7 (S.D. Cal. Nov. 29, 2016) (“reduce[d] technical complexity and improve[d] efficiency in the handheld device” amounted to “conclusory allegations [that] may be ignored on a motion to dismiss”).

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